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L Number	Hits	Search Text	DB	Time stamp
2	871	rough\$5 near3 pipe	USPAT	2002/02/12 18:11
3	935	rough\$5 near3 (pipe OR RISER)	USPAT	2002/02/12 18:11
4	93	(rough\$5 near3 (pipe OR RISER)) AND (EXTERIOR near3 (pipe OR RISER))	USPAT	2002/02/12 18:12
5	10	(rough\$5 near3 (pipe OR RISER)) AND (RELATIVE NEAR2 ROUGHNESS)	USPAT	2002/02/12 18:18
6	142	(rough\$5 near3 (pipe OR RISER)) AND ((outside near2 diameter) or (OD near3 pipe))	USPAT	2002/02/12 18:16
7	1	((rough\$5 near3 (pipe OR RISER)) AND ((outside near2 diameter) or (OD near3 pipe))) AND (RELATIVE NEAR2 ROUGHNESS)	USPAT	2002/02/12 18:17
8	0	((rough\$5 near3 (pipe OR RISER)) AND ((outside near2 diameter) or (OD near3 pipe))) AND (k/D)	USPAT	2002/02/12 18:17
9	149	K/D	USPAT	2002/02/12 18:18
10	282	RELATIVE NEAR2 ROUGHNESS	USPAT	2002/02/12 18:18
11	430	K/D or (RELATIVE NEAR2 ROUGHNESS)	USPAT	2002/02/12 18:21
12	31	(K/D or (RELATIVE NEAR2 ROUGHNESS)) and ((outside near2 diameter) or (OD near2 pipe))	USPAT	2002/02/12 18:19
13	104	(K/D or (RELATIVE NEAR2 ROUGHNESS)) and plastic	USPAT	2002/02/12 18:21
14	1	(K/D or (RELATIVE NEAR2 ROUGHNESS)) near4 plastic	USPAT	2002/02/12 18:23
15	1	(K/D or (RELATIVE NEAR2 ROUGHNESS)) near10 plastic	USPAT	2002/02/12 18:23
16	6	(K/D or (RELATIVE NEAR2 ROUGHNESS)) near10 (\$plastic or rubber or metal)	USPAT	2002/02/12 18:25
17	5	(K/D or (RELATIVE NEAR2 ROUGHNESS)) near10 (thermoplastic or rubber or metal)	USPAT	2002/02/12 18:25
-	29604	405/\$	USPAT	2001/08/16 11:20
-	13	405/\$ and VIV and induced	USPAT	2001/08/14 16:22
-	77	405/\$ and Vortex and induced	USPAT	2001/08/14 16:22
-	77	(405/\$ and Vortex and induced) or (405/\$ and VIV and induced)	USPAT	2001/08/16 15:01
-	1394	((405/211,212,195.1,216) or (114/243)).CCLS.	USPAT	2001/08/15 08:44
-	0	("1 and (VIV or vortex)").PN.	USPAT	2001/08/15 08:44
-	45	((("405/211,212,195.1,216") or ("114/243")).CCLS.) and (VIV or vortex)	USPAT	2001/08/15 08:45
-	10	((("405/211,212,195.1,216") or ("114/243")).CCLS.) and (VIV or vortex)) and smooth	USPAT	2001/08/15 09:15
-	0	254/412,416,404	USPAT	2001/08/15 09:15
-	249	(254/412,416,404).CCLS.	USPAT	2001/08/15 09:15
-	0	("6 and (fairing or cylinder)").PN.	USPAT	2001/08/15 09:16
-	2	((("254/412,416,404").CCLS.) and (fairing or cylinder)	USPAT	2001/08/15 09:16
-	5	((("254/412,416,404").CCLS.) and smooth	USPAT	2001/08/15 09:17
-	110	ultra-smooth	USPAT	2001/08/15 09:24
-	3929	"Reynolds number"	USPAT	2001/08/15 09:38
-	0	K/D and "peak to trough"	USPAT	2001/08/15 09:25

-	144	K/D	USPAT	2002/02/12 18:18
-	5	K/D and roughness	USPAT	2001/08/15 09:27
-	741	"Reynolds number" and coating	USPAT	2001/08/15 09:32
-	0	("Reynolds number" and coating) and ultra-smooth	USPAT	2001/08/15 09:32
-	272	("Reynolds number" and coating) and smooth	USPAT	2001/08/15 09:32
-	59	((("Reynolds number" and coating) and smooth) and drag	USPAT	2001/08/15 09:33
-	741	"Reynolds number" and coating	USPAT	2001/08/15 09:38
-	272	("Reynolds number" and coating) and smooth	USPAT	2001/08/15 09:41
-	75	((("Reynolds number" and coating) and smooth) and (drag or vortex)	USPAT	2001/08/15 09:44
-	74952	sleeve and cylinder	USPAT	2001/08/15 09:45
-	39109	(sleeve and cylinder) and flow	USPAT	2001/08/15 09:45
-	118	((sleeve and cylinder) and flow) and ((Reynolds or RE) adj number)	USPAT	2001/08/15 09:46
-	5241	((sleeve and cylinder) and flow) and coating	USPAT	2001/08/15 09:46
-	27	((sleeve and cylinder) and flow) and ((Reynolds or RE) adj number)) and ((sleeve and cylinder) and flow) and coating)	USPAT	2001/08/15 09:47
-	205	Navier-Stokes	USPAT	2001/08/15 09:48
-	39	Navier-Stokes and coating	USPAT	2001/08/15 10:41
-	71376	smooth and coating	USPAT	2001/08/15 10:42
-	203734	flow and cylinder	USPAT	2001/08/15 10:42
-	102816	flow and sleeve	USPAT	2001/08/15 10:42
-	17301	drag and friction	USPAT	2001/08/15 10:42
-	1755	(smooth and coating) and (flow and cylinder) and (flow and sleeve)	USPAT	2001/08/15 10:43
-	87	((smooth and coating) and (flow and cylinder) and (flow and sleeve)) and (drag and friction)	USPAT	2001/08/15 10:43
-	7	"5020561"	USPAT	2001/08/15 11:30
-	1	"2795278".PN.	USPAT	2001/08/15 11:32
-	1	"3220874".PN.	USPAT	2001/08/15 11:32
-	1	"3855137".PN.	USPAT	2001/08/15 11:32
-	1	"3863717".PN.	USPAT	2001/08/15 11:33
-	1	"4003393".PN.	USPAT	2001/08/15 11:33
-	1	"4254559".PN.	USPAT	2001/08/15 11:33
-	1	"4687595".PN.	USPAT	2001/08/15 11:33
-	1	"5020561".PN.	USPAT	2001/08/15 11:33
-	1	"4527518".PN.	USPAT	2001/08/15 11:33
-	1	"4325712".PN.	USPAT	2001/08/15 11:34
-	1	"4325397".PN.	USPAT	2001/08/15 11:34

-	1	"4310335".PN.	USPAT	2001/08/15 11:34
-	1	"4073983".PN.	USPAT	2001/08/15 11:34
-	1	"3892252".PN.	USPAT	2001/08/15 11:34
-	1	"3736288".PN.	USPAT	2001/08/15 11:35
-	1	"3689238".PN.	USPAT	2001/08/15 11:35
-	1	"3618624".PN.	USPAT	2001/08/15 11:36
-	1	"3132535".PN.	USPAT	2001/08/15 11:36
-	1	"2958205".PN.	USPAT	2001/08/15 11:36
-	1	"3892252".PN.	USPAT	2001/08/15 11:36
-	1	"4073983".PN.	USPAT	2001/08/15 11:36
-	1	"3929088".PN.	USPAT	2001/08/15 11:37
-	1	"3912517".PN.	USPAT	2001/08/15 11:37
-	1	"3808133".PN.	USPAT	2001/08/15 11:37
-	1	"3769022".PN.	USPAT	2001/08/15 11:38
-	1	"3769022".PN.	USPAT	2001/08/15 11:38
-	1	"3762928".PN.	USPAT	2001/08/15 11:38
-	1	"3575123".PN.	USPAT	2001/08/15 11:38
-	1	"3516835".PN.	USPAT	2001/08/15 11:39
-	1	"3037932".PN.	USPAT	2001/08/15 11:39
-	1	"2921027".PN.	USPAT	2001/08/15 11:39
-	1	"2580036".PN.	USPAT	2001/08/15 11:39
-	4	"3581449"	USPAT	2001/08/16 11:23
-	1	"3245177".PN.	USPAT	2001/08/16 11:21
-	1	"3214877".PN.	USPAT	2001/08/16 11:21
-	1	"3076533".PN.	USPAT	2001/08/16 11:21
-	1	"1016984".PN.	USPAT	2001/08/16 11:22
-	1	"0855204".PN.	USPAT	2001/08/16 11:22
-	8290	drag near3 reduc\$	USPAT	2001/08/16 11:23
-	122	"relative roughness"	USPAT	2001/08/16 11:29
-	215287	friction and surface	USPAT	2001/08/16 11:30
-	35346	friction near3 reduc\$	USPAT	2001/08/16 11:30
-	31195	vibration and friction	USPAT	2001/08/16 11:30
-	42375	(drag near3 reduc\$) or (friction near3 reduc\$)	USPAT	2001/08/16 11:31
-	4912	((drag near3 reduc\$) or (friction near3 reduc\$)) and (vibration and friction) and (friction and surface)	USPAT	2001/08/16 11:31
-	2472	((((drag near3 reduc\$) or (friction near3 reduc\$)) and (vibration and friction) and (friction and surface)) and flow	USPAT	2001/08/16 11:31

-	1086	(((((drag near3 reduc\$) or (friction near3 reduc\$)) and (vibration and friction) and (friction and surface)) and flow) and (smooth or rough)	USPAT	2001/08/16 11:31
-	296	(((((drag near3 reduc\$) or (friction near3 reduc\$)) and (vibration and friction) and (friction and surface)) and flow) and (smooth or rough)) and (reynolds or Re)	USPAT	2001/08/16 13:43
-	866	fairing and plastic	USPAT	2001/08/16 13:43
-	3242	fairing	USPAT	2001/08/16 13:43
-	314	fairing and "coating"	USPAT	2001/08/16 13:44
-	4	(fairing and "coating") and (smooth near5 coating)	USPAT	2001/08/16 13:44
-	139	fairing and "carbon fiber"	USPAT	2001/08/16 13:49
-	112	fairing and buoyant	USPAT	2001/08/16 13:50
-	66	(fairing and buoyant) and plastic	USPAT	2001/08/16 13:50
-	0	(fairing and buoyant) and (smooth near5 coating)	USPAT	2001/08/16 13:50
-	18	(fairing and buoyant) and (smooth near10 surface)	USPAT	2001/08/16 13:54
-	18547	Vortex or VIV	USPAT	2001/08/16 13:54
-	123	"Vortex Induced Vibration" or VIV	USPAT	2001/08/16 14:48
-	19	("Vortex Induced Vibration" or VIV) and smooth	USPAT	2001/08/16 14:01
-	14	"5410979"	USPAT	2001/08/16 14:02
-	0	"5410979" and (surface near10 smooth)	USPAT	2001/08/16 14:02
-	0	"5410979" and carbon	USPAT	2001/08/16 14:03
-	0	"5410979" and coating	USPAT	2001/08/16 14:03
-	5	"5410979" and plastic	USPAT	2001/08/16 14:06
-	12	("Vortex Induced Vibration" or VIV) and friction	USPAT	2001/08/16 14:16
-	56	strake and vibration	USPAT	2001/08/16 14:16
-	25	("Vortex Induced Vibration" or VIV) and (paint or coating)	USPAT	2001/08/16 15:01
-	77	(405/\$ and Vortex and induced) or (405/\$ and VIV and induced)	USPAT	2001/08/16 15:02
-	21	((405/\$ and Vortex and induced) or (405/\$ and VIV and induced)) and sleeve	USPAT	2001/08/16 15:02
-	6	((405/\$ and Vortex and induced) or (405/\$ and VIV and induced)) and sleeve) and cylindrical	USPAT	2001/08/16 15:02
-	1	"5722797".PN.	USPAT	2001/08/16 17:38
-	1	"5722492".PN.	USPAT	2001/08/16 17:39
-	1	"5683206".PN.	USPAT	2001/08/16 17:39
-	1	"5558467".PN.	USPAT	2001/08/16 17:40
-	1	"4740109".PN.	USPAT	2001/08/16 17:40
-	1	"4703709".PN.	USPAT	2001/08/16 17:41
-	1	"4185694".PN.	USPAT	2001/08/16 17:41
-	1	"3572041".PN.	USPAT	2001/08/16 17:42

-	1	"3500783".PN.	USPAT	2001/08/16 17:42
-	1	"3572041".PN.	USPAT	2001/08/16 17:42